

Notice of Allowability

Application No.

10/550,566

Examiner

Brian M. Healy

Applicant(s)

CHONO ET AL.

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2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 06/26/2006.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 20051215
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


BRIAN HEALY

PRIMARY PATENT EXAMINER

DETAILED ACTION***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance: The closest prior art of record, i.e. Shuichi et. al., Japanese Publication No. 11-223178 teaches (Figs.1-5) a liquid crystal power generator device comprising: a pair of parallel electrodes 2,3 attached to opposed substrates 1 forming a sealed cell into which is placed liquid crystal L and also including a rotor 5 and rotor energy extraction means so that a convection swirl S is generated between the electrodes 2,3 when a voltage 4 is present.

Neither Shuichi et. al. or any of the other references of record (taken singly or in combination) teaches or suggests the claimed object rotating mechanism using a flow of a liquid crystal comprising: a pair of members having opposed surfaces which are opposed to each other and provided to be relatively movable in a state in which the opposed surfaces are opposed to each other and a liquid crystal is provided between the opposed surfaces of the members with the liquid crystal molecule rotating means for rotating a liquid crystal molecule of the liquid crystal in a crossing surface crossing one of the opposed surfaces wherein the liquid crystal rotating means includes a pair of orientation films formed on the opposed surfaces of the members respectively, with the orientation films are subjected to a rubbing treatment in which directions of a rotation around an identical crossing line crossing the members are reverse to each other along a circumference of a circle having a center a center on the crossing line These limitations are recited in independent claims 1 and 2. Dependent claims 3-6 are

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dependent on either claims 1 or 2 and include the limitations of the independent claims along with other additional limitations (See the dependent claims for these specific additional limitations.).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

A copy of PTO-1449 will be included in this office action.

The following references are also cited by the Examiner as being pertinent and/or related art: Yazaki et. al., U.S.P. No. 5,867,237 (Figs.1-7), Suzuki et. al., U.S.P. No. 5,579,142 (Figs.1-21C), Mochizuki et. al., U.S.P. No. 5,739,885 (Figs.1-15C), Shimada, U.S. P. No. 5,710,609 (Figs.1-5), Matsuyama et. al., U.S.P. No. 5,831,701 (Figs.1-15) and Chono et. al., U.S. Patent Application Publication No. US 2006/0238686A1 (Note entire reference).

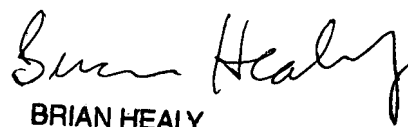
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571)272-2347. The examiner can normally be reached on Compressed schedule Mon.-Fri. 6AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian M. Healy
Primary Examiner
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BRIAN HEALY
PRIMARY PATENT EXAMINER